



Atty. Dkt. No. 074273-0242

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Hirobumi FURIHATA et al.  
Title: CONTROLLER DRIVER AND DISPLAY APPARATUS USING  
THE SAME  
Appl. No.: 10/561,270  
International Filing Date: 06/28/2004  
Filing Date: 01/23/2006  
371(c) Date:  
Examiner: Unassigned  
Art Unit: Unassigned  
Confirmation Number: 5886  
Number:

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR §1.56**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of each non-U.S. patent document and each non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

**TIMING OF THE DISCLOSURE**

The listed documents are being submitted in compliance with 37 CFR §1.97(b), within three (3) months of the mailing date of a foreign office communication and the foreign search report.

**RELEVANCE OF EACH DOCUMENT**

Document A17, listed on the attached PT0/SB/08 was cited as being relevant during the prosecution of the corresponding Korean application. A partial English translation of the Korean Office Action of August 13, 2007, follows:

(Concrete Reasons for Rejection)

1. It is deemed that the inventions related to Claims 1 through 4, 10, and 14 through 17 of the present application could have been easily invented by a person with ordinary knowledge of technology in the field to which the invention belongs prior to the filing of this application based on the inventions indicated below, and therefore cannot receive a patent according to the stipulations of Article 29, Paragraph 2 of the Japan Patent Law.

-- Note --

The present application relates to a memory control device for a flat-panel display to reduce power consumption, and relates to a data driver, Cited Invention 1 (US 2002/126108A1 (September 12, 2002)) relates to a semiconductor device for displaying a still image with reduced power consumption, and Cited Invention 2 (Unexamined Korean Patent Application Publication 2001-37956 (May 15, 2001)) relates to a display device for driving multiple panels simultaneously using a single driving device.

Comparison of the Invention as Set Forth in the Present Application to the Cited Inventions:

1) Claim 1 relates to a control device and driver, characterized in that it comprises a working memory, a graphics engine, a display memory, and a driver circuit.

The control device and driver comprising a working memory, a graphics engine, a display memory, and a driver circuit of Claim 1 corresponds to the display device of Cited Invention 1 comprising a first memory, a second control circuit, a memory portion, and a data line side driver circuit, and a person with ordinary knowledge of the technology in the field to which the invention belongs could have invented this invention easily based on Cited Invention 1.

Claim 2 and Claim 3 describe the type of image data of Claim 1, where this type of detailed structure is no more than a selection item that could be used selectively as needed, or which could be achieved easily by a simple design change, by a person with ordinary knowledge of the technology in this field, and thus no difficulty is seen in the structure pertaining thereto, and the effects thereof could also be anticipated.

Claim 4 limits the data transfer of the first bitmap data of Claim 1; however, this type of detailed structure is no more than a selection item that could be used selectively as needed, or which could be achieved easily by a simple design change, by a person with ordinary knowledge of the technology in this field, and thus no difficulty is seen in the structure pertaining thereto, and the effects thereof could also be anticipated.

Claim 10 limits the memory cell within the working memory and display memory of Claim 1; however, this type of detailed structure is no more than a selection item that could be used selectively as needed, or which could be achieved easily by a simple design change, by a person with ordinary knowledge of the technology in this field, and thus no difficulty is seen in the structure pertaining thereto, and the effects thereof could also be anticipated.

Claim 14 and Claim 15 are characterized by the further inclusion of a processing circuit for processing bitmap data in Claim 1; however, the processing circuit corresponds to the second control circuit and data line side driver circuit, so a person with ordinary knowledge of the technology in the field to which the invention belongs could have invented this invention easily based on Cited Invention 1.

2) Claim 16 relates to a display device characterized in that it comprises a control device and driver and a first display panel and a second display panel, where the control device and driver comprises a working memory, a graphics engine, a display memory, and a driver circuit.

The invention as set forth in Claim 16 could have been invented easily by a person with ordinary knowledge of the technology in the field to which the invention belongs by combining the display device comprising the first memory, the second control circuit, the memory portion, and the data line side driver circuit of Cited Invention 1 with the display device that drives multiple panels simultaneously using a single driving device of Cited Invention 2.

Claim 17 is characterized by the display of identical images on the first display panel and the second display panel in Claim 16, where this type of detailed structure could have been invented easily by a person with ordinary knowledge of the technology in the field to which the invention belongs by combining the display device of Cited Invention 1 with the display device that drives multiple panels simultaneously using a single driving device in Cited Invention 2.

Consequently, the inventions related to Claims 1 through 4, 10, and 14 through 17 of the present application could have been easily invented by a person with ordinary knowledge of technology in the field to which the invention belongs by combining Cited Invention 1 and Cited Invention 2.

(Attachments)

Attachment 1: US 2002/126108A1 (September 12, 2002)

Attachment 2: Korean Unexamined Patent Application Publication 2001-37956 (May 15, 2001).

Documents A1-16 and A18-A19, listed on the attached PTO/SB/08 were cited as being relevant during the prosecution of the corresponding European application. A copy of the European Search Report is attached setting forth the portion of each document considered relevant by the examiner. An English-language counterpart of the foreign-language documents has not been provided. The absence of a translation or an English-language counterpart document does not relieve the PTO from its duty to consider any submitted document (37 CFR §1.98 and MPEP§609).

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Applicant's statements regarding the Korean office action are based on a translation that applicant's representative obtained. These statements should in no way be considered as an agreement by applicants, with or an admission of, what is asserted in the Korean office action.

**STATEMENT**

The undersigned hereby states in accordance with 37 CFR §1.97(e)(1) that each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to filing of this Statement.

Although Applicant believes that no fee is required for this Request, the Commissioner is hereby authorized to charge any additional fees which may be required for this Request to Deposit Account No. 19-0741.

Respectfully submitted,

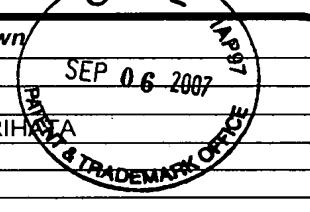
By 

Date: September 6, 2007

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Substitute for form 1449/PTO				<b>Complete if Known</b> 	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> Date Submitted: September 6, 2007 <i>(use as many sheets as necessary)</i>					
Sheet	1	of	1	Attorney Docket Number	074273-0242

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
A1	2004-056872A1		03-25-2004	PAI et al.	
A2	2002-126108A1		09-12-2002	KATO et al.	
A3	2002/075272A1		06-20-2002	GORO et al.	
A4	2001-015727A1		08-23-2001	GUNJI et al.	
A5	5,907,314A		10-17-2001	NEGISHI et al.	
A6	5,170,157A		12-08-1992	ISHII	
A7	5,034,733A		07-23-1991	OKAZAWA et al.	

**UNPUBLISHED U.S. PATENT APPLICATION DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Application Document	Filing Date of Cited Document MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Serial Number-Kind Code <sup>2</sup> (if known)			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Documents	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
A8	EP 1 411 492 A1		04-21-2004	NEC ELECTRONICS CORP.		
A9	EP 1 182 639 A2		05-07-2001	HITACHI KOKUSAI ELEC.		
A10	EP 1 143 331 A2		10-10-2001	SONY CORP.		
A11	EP 1 164 570 B1		12-19-2001	SEIKO EPSON CORP.		
A12	EP 1 146 501 A1		10-17-2001	SEIKO EPSON CORP.		
A13	EP 0 881 598 A2		12-02-1998	MITSUBISHI DENKI KABUSHIKI KAISHA		
A14	EP 0 681 282 B1		11-08-1995	SUN MICROSYSTEMS		
A15	EP 0 681 280 B1		11-08-1995	APPLE COMPUTER INC.		
A16	EP 0 488 851 A1		11-19-1991	THOMSON-LCD		
A17	KR 10-2001-0037956		05-15-2001			
A18	WO 95/12164		05-04-1995	SUN MICROSYSTEMS INC.		
A19	JP 7-028990		01-31-1995	NEC SHIZUOKA LTD.		A

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>6</sup>
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Examiner Signature	Date Considered
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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